

Endocrinology training in India

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THE PAST AND PRESENT

India has a long tradition of formal medical education, dating back to the times of Ayurveda. The first modern medical school of Asia, the Medical College of Bengal, was established in Calcutta in 1835, with Dr. Bramley as its Principal. Dr. Bramley led epidemiological surveys to assess the prevalence of goiter in the Himalayan and peri-Himalayan regions,^[1] thus beginning the era of modern endocrine study in India 180 years ago.

Formal postgraduate endocrinology training in the country, too, is nearing 50 years of existence. The first post graduate fellowship program, labeled Doctor of Medicine (D.M), was begun in 1969 by Dr. G. K. Rastogi at Post Graduate Institute of Medical Education and Research, Chandigarh.^[2] At about the same time, in 1971, a group of 12 visionaries came together at Mangalore to set up the Endocrine Society of India (ESI). Mutual fellowship helped expand and strengthen the field of endocrinology, and by 1992, there were seven colleges providing post graduate degree courses in endocrinology and metabolism. As of today (January 2015), a total of 23 institutes offer a D.M program whereas eight hospitals enroll students for Diplomate of National Board (DNB) training in endocrinology.^[3,4] These colleges are spread over the length and breadth of the country [Figure 1]. Fifty-five seats are available for D.M courses in 22 departments each year, excluding the autonomous All India Institute of Medical Sciences, New Delhi, which has an intake of 11 students spread over 3 years. Nine DNB residencies are filled each year as well.



Figure 1: Indian colleges providing endocrinology training

THE STUDENT'S JOURNEY: PRE-TRAINING

Indian medical education is rigorous and competitive. A 5.5 years undergraduate course (4.5 years of study, followed by 1-year of clinical internship) leads to the award of an MBBS (Bachelor of Medicine, Bachelor of Surgery) degree. Minimal attention is paid to endocrinology and metabolism in the heavily loaded undergraduate curriculum. Interested medical graduates compete for admission to a 3 years long M.D. program

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in Internal Medicine or Pediatrics. After completing this post graduate course, students again appear for national entrance examinations to the 3 years DM or DNB course. Thus, it takes a minimum of 11.5 years, assuming no breaks (voluntary or enforced!) in the study, to become an endocrinologist in India.

Endocrinology courses are highly valued. In 2014, at Mumbai, students who stood 1st, 3rd, and 9th, in the combined entrance examination opted for DM Endocrinology, choosing the specialty over other options including gastroenterology and cardiology. All available four seats were filled up at rank 15, before other subjects (personal communication: Tushar Bandgar, Ameya Joshi). This supports earlier reports, which highlight the preference of internal medicine residents for a career in diabetology and endocrinology.^[5]

THE STUDENT'S JOURNEY: DURING TRAINING

Endocrinology training in India includes comprehensive education in clinical skills, laboratory endocrinology (including biochemistry, radioimmunoassay and nuclear medicine) and research. All departments provide outdoor and indoor clinical training. There is no dearth of clinical material, and trainees are exposed to a wide spectrum of endocrine morbidity. Most colleges offer formal interaction with allied specialties such as radiology, pathology, nuclear medicine, ophthalmology and nuclear medicine. Teaching programs include case presentations, journal discussions and reviews of burning topics. Dedicated laboratory endocrinology postings are a part of the DM training schedule as well.

There is no central curriculum for the country, however.^[6] This reflects the heterogeneous character of the vast nation that India is. Uniformity, however, is maintained by national professional bodies, viz. the Medical Council of India, and National Board of Examinations, which inspect and regulate medical colleges and departments regularly. Frequent interaction through, both formal and informal contacts, between various endocrinology departments, ensures that innovation spread throughout the profession. Two internal, as well as two external examiners, assess every student, over a grueling 2 day long examination before a DM or DNB degree can be awarded. Thus, a similar level of competence is maintained across the country.

FINANCE

Students receive a monthly stipend ranging from INR 20,000 to 75,000 during their training. This amount is

usually adequate to meet daily living expenses and the cost of educational material. A major financial challenge for many postgraduate students is the cost of research work. Most departments have a limited budget for research, which restricts the scope of work that can be done. External funding for thesis-related is available from various agencies but is not easy to source.

ENDOCRINE SOCIETY OF INDIA ACTIVITIES

The ESI strives to support endocrine students in their aim toward becoming capable professionals. The ESI conducts, with industry partners, the AV Gandhi Award for Excellence in Endocrinology,^[7] and the ESI-Torrent Young Scholars Award (TYSA). These nation-wide competitions assess endocrinology students in various formats, including thesis presentation, quiz and public speaking. Held once a year, these events generate considerable enthusiasm among the student community.

Annual ESI conferences encourage students to submit research proposals, as well as completed studies, thus offering exposure to, and feedback from, a wider audience. Travel grants are offered to postgraduate students to facilitate participation.^[8]

The ESI has also begun, from 2015 onwards, a national workshop on Fundamental Research Methodology, targeting 1st year endocrine students who are in the process of preparing their thesis projects. Simultaneously, it offers five ESI-Novo Nordisk young Researcher Awards of INR 200,000 each, to the best research proposals, received each year.^[9]

The Advocacy Committee of ESI has included students, both undergraduate and post graduate, as part of its priority target audience for the period 2015-2016. All these activities help improve the interest in, and quality of, endocrine training in India.

OTHER ACTIVITIES

Apart from ESI – sponsored events, other organizations also run programs for endocrine trainees. The Amrita Institute of Medical Sciences holds annual updates for students at Kochi,^[6] while the AV Gandhi Award agenda includes Career Development for budding endocrinologists from 2015 onwards.

The South Asian Federation of Endocrine Societies (SAFES) provides a platform for exchange of ideas and information between students of various South Asian countries. The various SAFES events enhance

the quality of endocrine training across the region, by giving opportunity to students to present their research in oral and poster format. The quiz, conducted at the SAFES Summit in Hyderabad (2013), and planned for Dhaka (2015), is one way of demonstrating the interesting side of endocrinology to trainees.

THE STUDENT'S JOURNEY: POST-TRAINING

The endocrine mentee-mentor relationship, in most cases, is a unique one-to-one bond modeled upon the traditional Indian “guru-shishya” or teacher-student interaction. This bond develops over the 3-year training period, but extends and matures even after that, lasting a life time. Senior endocrinologists take pride in identifying themselves by their in academic institutions of training, and by the name of the guide they have worked with. This relationship also creates an informal system of ‘brothers and ‘sisters-in-training’, in which all students who have worked in a particular guide, come together as ‘guru-bhai’ or “brother disciples of the same guru”.

Most Indian endocrinology graduates prefer to remain within the country, finding employment in academic institutions and corporate hospitals, or working in self-employed capacity. Very few graduates migrate abroad after endocrine training. The opposite trend, in fact, in quite common: Indians who have received endocrine training in the West are increasingly returning to their country.

As of now, there is no formal requirement for periodic recertification in endocrinology in India. Most state medical councils, however, have made it mandatory for practicing physicians, including endocrinologists, to obtain a minimum number of CME credits every year. This can be done by attending approved CME programs, delivering talks at designated meetings, or publishing in indexed journals.

THE FUTURE

However certain areas of Indian endocrine training need improvement. A national curriculum is needed to bring uniformity in quality of education and training. More

interdepartmental communication and collaboration can strengthen the endocrine fraternity in the country. Focus on research and medical writing, with provision of adequate funds, will help improve India's contribution to global endocrinology.

Indian endocrinology students are able to compete with the rest of the world at various platforms. Indian trainees are now a common sight at international meetings, presenting their data, asking questions, sharing their knowledge, and improving their skills. These interactions help improve the standard of endocrinology in the country. With enhanced support and attention, postgraduate endocrine training in India is now geared up to meet the poly-headed Ravana of endocrine and metabolic disease.

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Conflict of interest

There are no conflicts of interest.

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